



UNMASKING HTML EMAILS

Level 1 - Clients and Markup

The design for the email we'll build




In this level...

★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★

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EXPERIENCE 3 BONE-CRUSHING HOURS



• **16** •
DE JUNIO

OPEN TO THE PUBLIC
ADULTS 15 PESOS
NINOS 10 PESOS

BUY TICKETS

The skills you'll need to compete

Power Moves

HTML and CSS

Media queries

Signature Move

Using external resources



UNMASKING
HTML EMAILS

An HTML email base

email.html

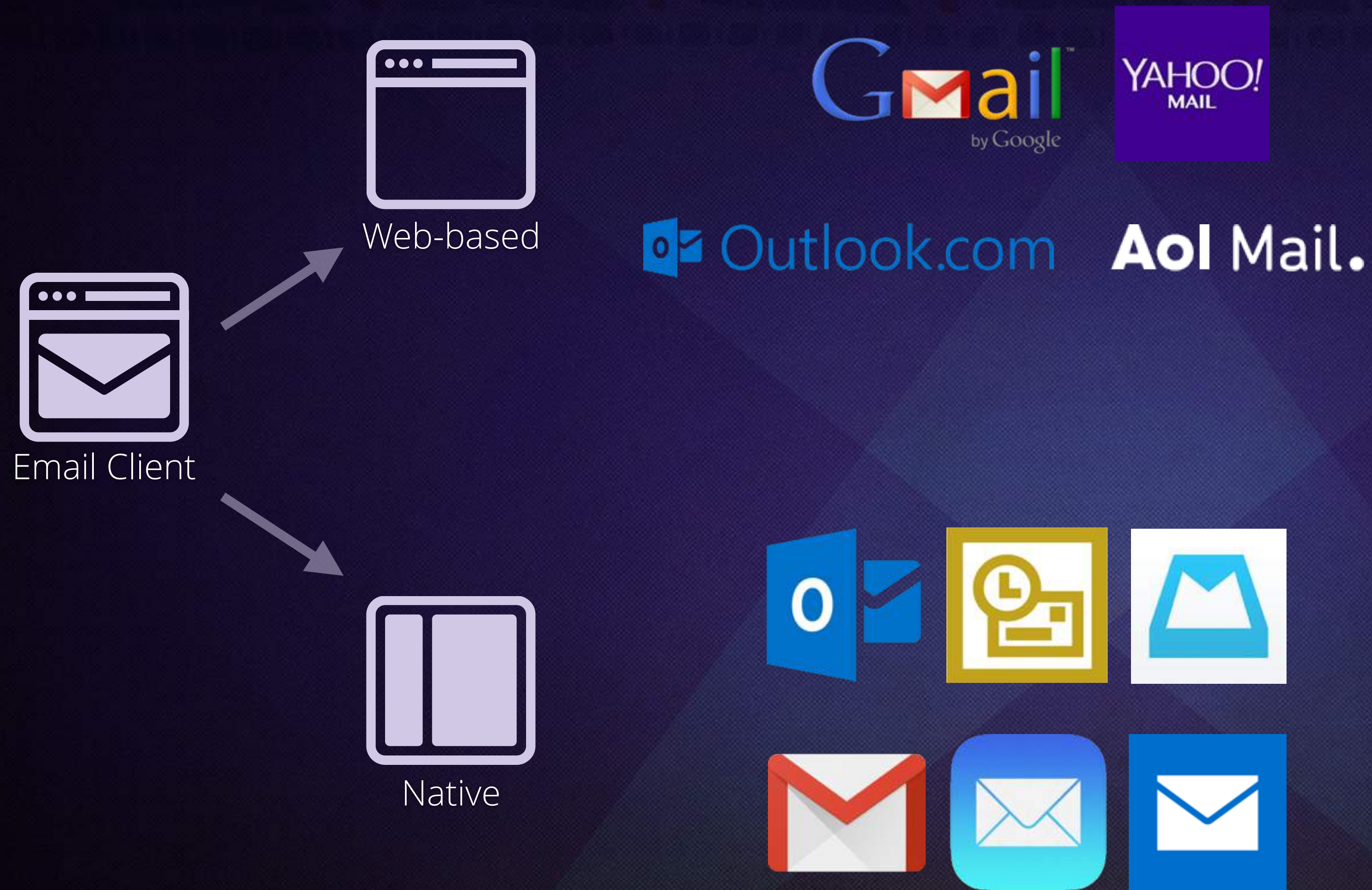
Front-end Foundations

```
<!DOCTYPE html>
<html>
  <head>
    <meta charset="utf-8">
    <title>HTML Email Base</title>
    <meta name="viewport" content="width=device-width" />
  </head>
  <body style="margin: 0; padding: 0;">
    <!-- Content -->
  </body>
</html>
```



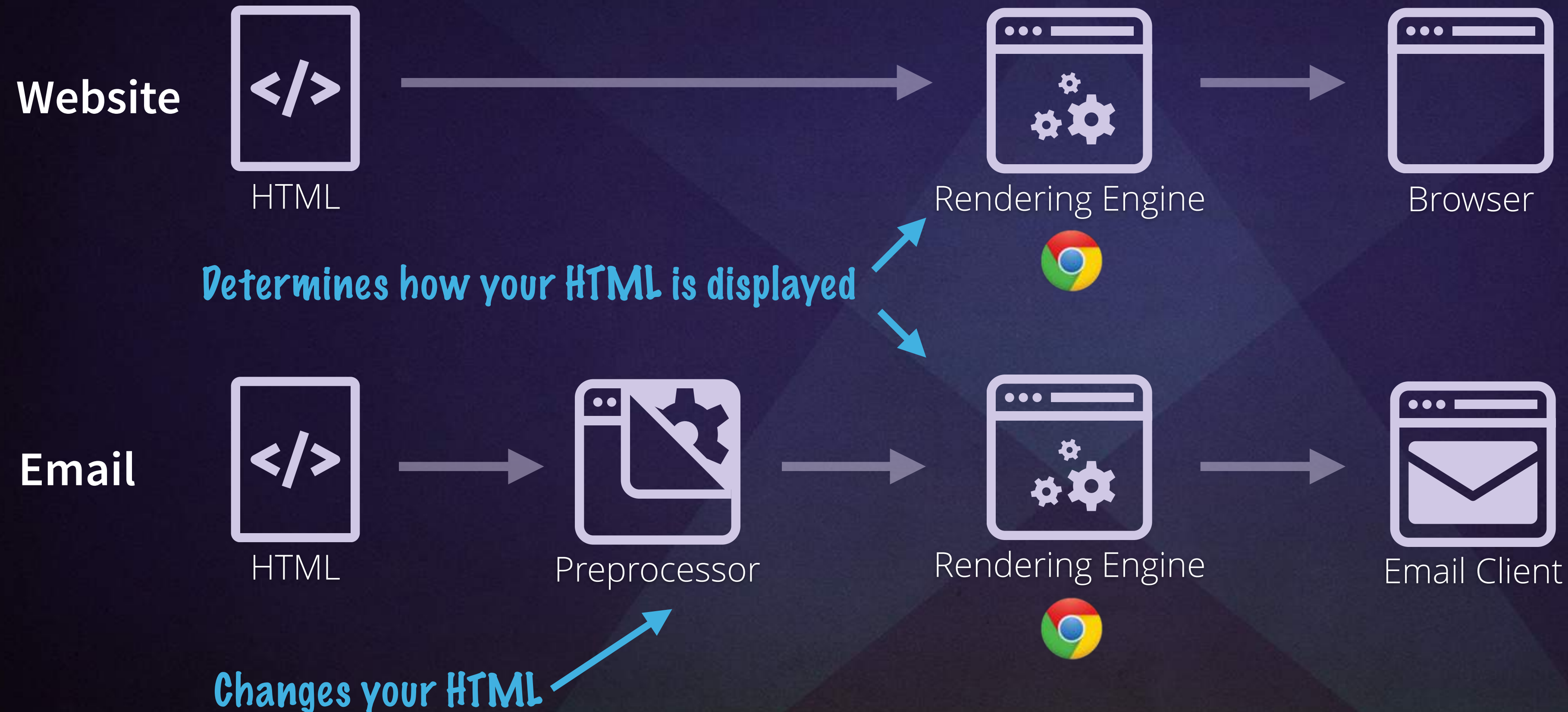
Journey Into Mobile

Email clients



HTML email clients preprocess HTML

In email clients, HTML is altered by a preprocessor before they are rendered.



Preprocessors are your strongest opponents

The preprocessor is intended to protect the client from harmful code.



Power Moves

Removes or changes HTML tags

Removes or changes CSS

Overrides styles with app CSS

Changes the entire document structure

Signature Move

Removes all JavaScript

Gmail has the most aggressive preprocessor

The popularity of Gmail dictates much of how HTML and CSS must be written.



Power Moves

Removes any `<link>` tags

Overrides styles with app CSS

Changes the entire document structure

Signature Move

Removes `<style>` tags

Adding content to an email

email.html

Base HTML



```
<!DOCTYPE html>
<html>
  <head>
    <meta charset="utf-8">
    <title>HTML Email Base</title>
    <meta name="viewport" content="width=device-width" />
  </head>
  <body style="margin: 0; padding: 0;">
    
  </body>
</html>
```



Email content



Images need to have absolute URLs

email.html

```
<!DOCTYPE html>
<html>
  <head>
    <meta charset="utf-8">
    <title>HTML Email Base</title>
    <meta name="viewport" content="width=device-width" />
  </head>
  <body style="margin: 0; padding: 0;">
    
  </body>
</html>
```



Absolute URL

For brevity in examples, we'll write like this: `src= "...stars.png"`

Adding copy to an email

email.html

```
<!DOCTYPE html>
<html>
  <head>
    <meta charset="utf-8">
    <title>HTML Email Base</title>
    <meta name="viewport" content="width=device-width" />
  </head>
  <body style="margin: 0; padding: 0;">
    
    <h1>Lucha Libre!</h1>
    <p>Experience 3 Bone-Crushing Hours</p>
  </body>
</html>
```

Email content



Code examples

To focus on specific code, we'll use “...” to represent additional code that isn't shown.

email.html

Opening HTML → ...

```
<body style="margin: 0; padding: 0;">
  
  <h1>Lucha Libre!</h1>
  <p>Experience 3 Bone-Crushing Hours</p>
</body>
```

Closing HTML → ...

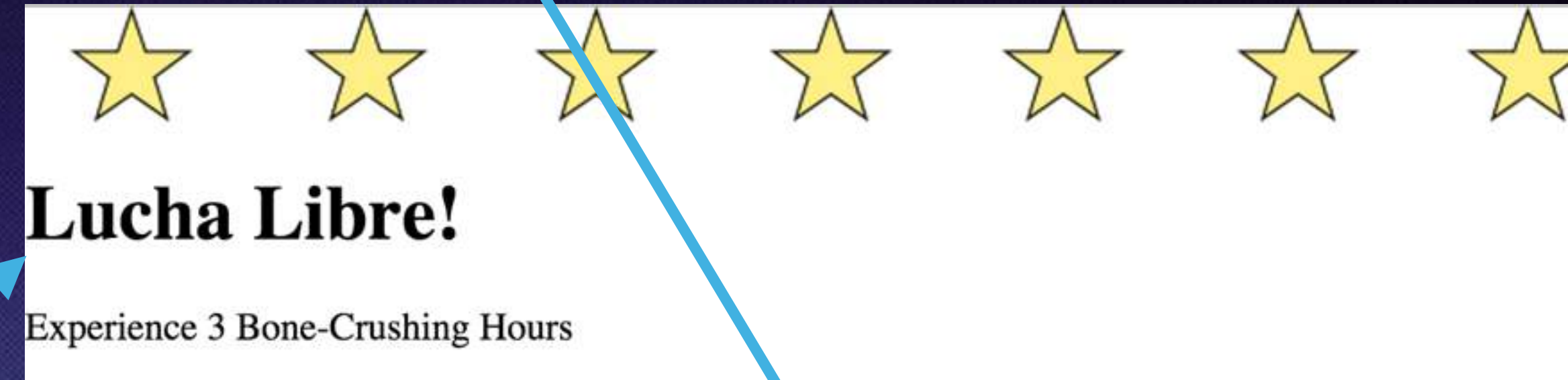
Testing in a browser vs. an email client

The results will vary in clients with different preprocessors and rendering engines.

email.html

```
...  
<body style="margin: 0; padding: 0;">  
    
  <h1>Lucha Libre!</h1>  
  <p>Experience 3 Bone-Crushing Hours</p>  
...
```

Chrome rendering engine (Blink)



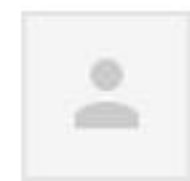
Gmail's preprocessor



Text styles are different



Inspecting elements with browser dev tools



Code School Team faculty@codeschool.com [via](#) mail207.atl61.mcsv.net [Unsubscribe](#)

to me ▾



Lucha Libre!

Exp

Copy

Search Google for 'Lucha'

Print...

Inspect Element

Look Up in Dictionary

Speech

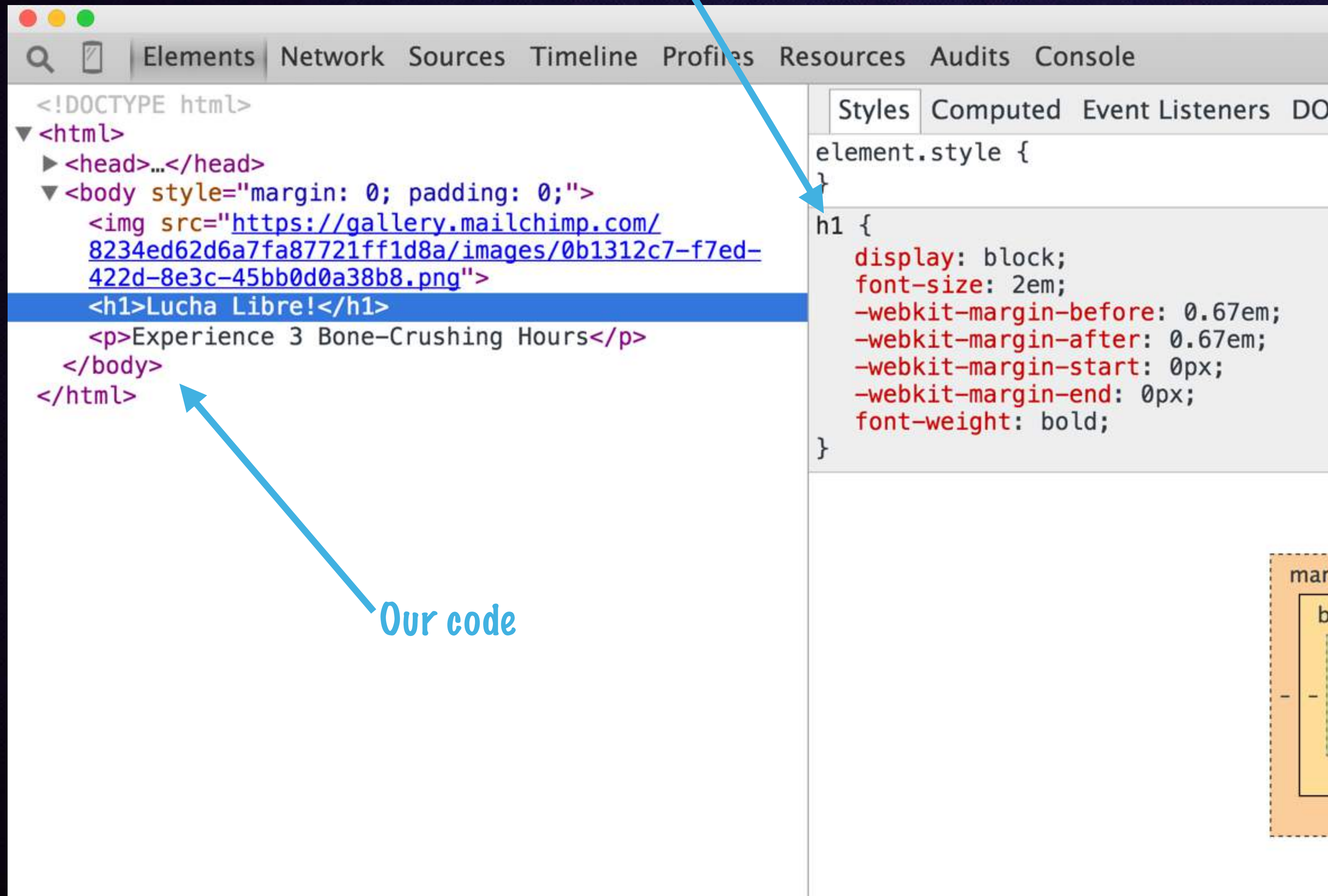
Services



Right-click for developer tools

Inspecting our email locally

Default styles set by Chrome



The screenshot shows the Chrome DevTools interface with the 'Elements' panel on the left and the 'Styles' panel on the right. The 'Elements' panel displays the HTML structure of an email, with the `<h1>Lucha Libre!</h1>` tag selected. The 'Styles' panel shows the default styles for the `h1` element, including `display: block;`, `font-size: 2em;`, and `font-weight: bold;`. A blue arrow points from the text 'Default styles set by Chrome' to the 'Styles' panel. Another blue arrow points from the text 'Our code' to the `<h1>Lucha Libre!</h1>` tag in the 'Elements' panel.

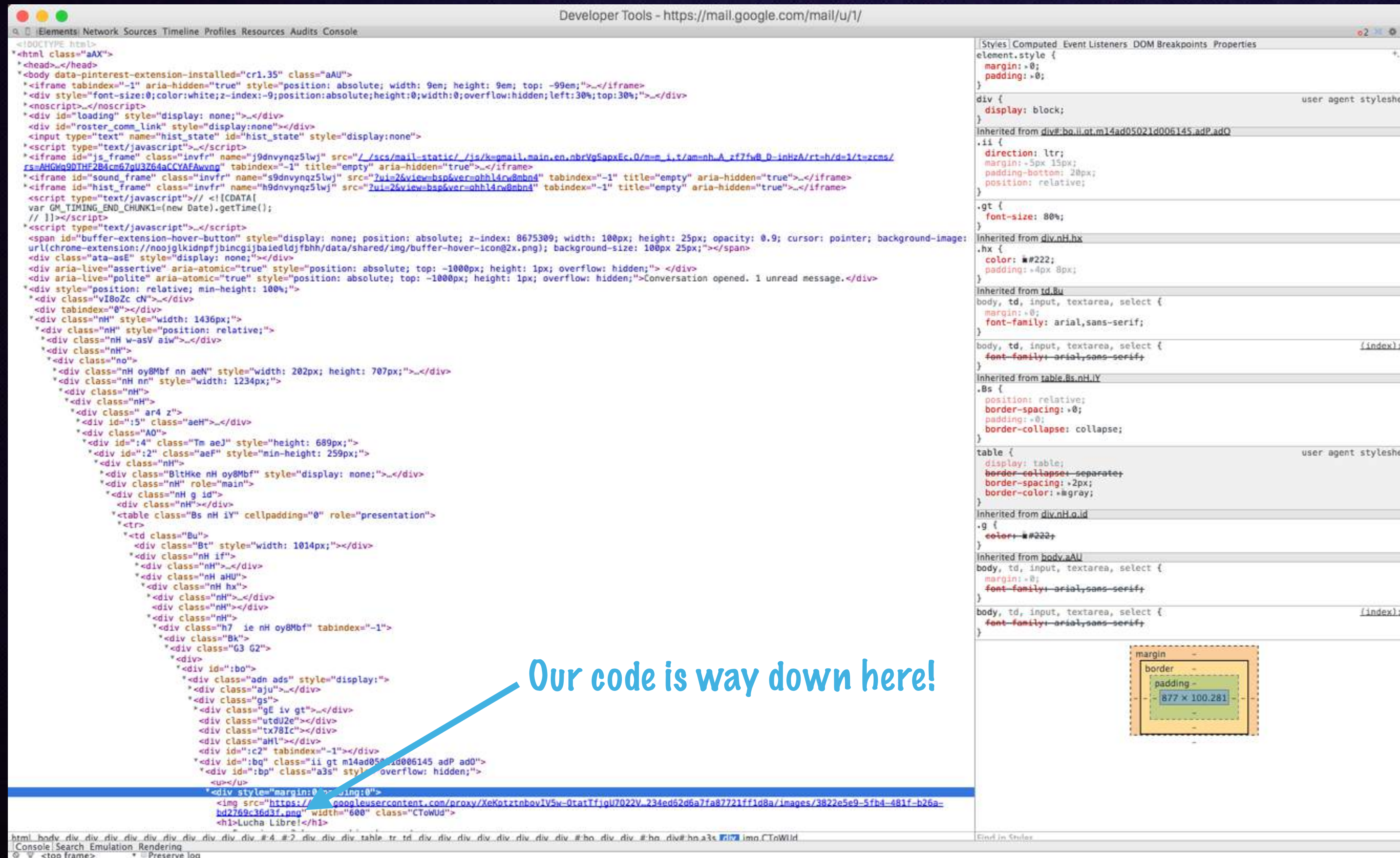
```
<!DOCTYPE html>
<html>
  <head>...</head>
  <body style="margin: 0; padding: 0;">
    
    <h1>Lucha Libre!</h1>
    <p>Experience 3 Bone-Crushing Hours</p>
  </body>
</html>
```

Styles



```
element.style {
}

h1 {
  display: block;
  font-size: 2em;
  -webkit-margin-before: 0.67em;
  -webkit-margin-after: 0.67em;
  -webkit-margin-start: 0px;
  -webkit-margin-end: 0px;
  font-weight: bold;
}
```


Our code in the Gmail web application



Our code after Gmail's preprocessor



Developer Tools - https://mail.google.com/mail/u/1/

Elements Network Sources Timeline Profiles Resources Audits Console

inline body styles →

cached image →

H1 →

p →

```
<div style="margin:0; padding:0">
  
  <h1>Lucha Libre!</h1>
  <p>Experience 3 bone-crushing hours</p>
  <div class="yj6qo"></div>
  <div class="adL">
  </div>
  <div class="adL">
  </div>
  </div>
  <div id=":ck" class="ii gt undefined" style="display:none">
  </div>
```

Styles Computed Event Listeners DOM Breakpoints >>

Inherited from div.rH.hx

```
.hx {
  color: #222;
  padding: 4px 8px;
}
```

Inherited from td.Bu

```
body, td, input, textarea, select {
  margin: 0;
  font-family: arial,sans-serif;
}
```

body, td, input, textarea, select { (index):10

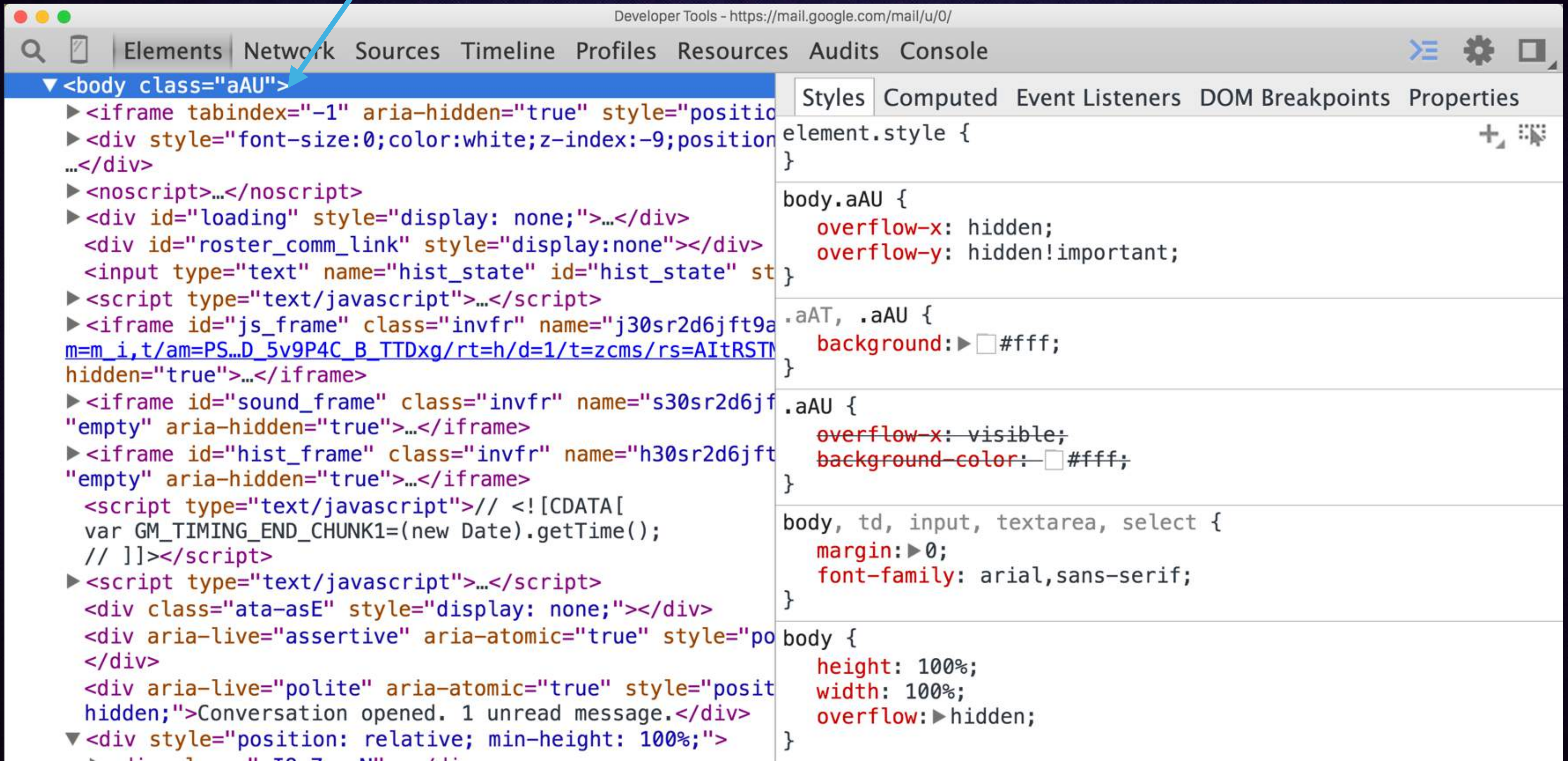
```
font-family: arial,sans-serif;
}
```

Inherited from table.Bs.nH.iY

```
.Bs {
  position: relative;
  border-spacing: 0;
  padding: 0;
  border-collapse: collapse;
}
```


"All your code are belong to clients"

Our inline styles are gone!

A screenshot of the Chrome Developer Tools interface. The 'Elements' panel on the left shows the DOM tree with the <body class="aAU"> element selected. The 'Styles' panel on the right shows the cascade of styles. The 'element.style' section is empty, indicating that inline styles have been removed. The 'body.aAU' section shows styles like 'overflow-x: hidden;' and 'overflow-y: hidden!important;'. The '.aAT, .aAU' section shows 'background-color: #fff;'. The '.aAU' section shows 'overflow-x: visible;' and 'background-color: #fff;'. The 'body, td, input, textarea, select' section shows 'margin: 0;' and 'font-family: arial,sans-serif;'. The 'body' section shows 'height: 100%; width: 100%; overflow: hidden;'.

Developer Tools - https://mail.google.com/mail/u/0/

Elements Network Sources Timeline Profiles Resources Audits Console

▼ <body class="aAU">

- ▶ <iframe tabindex="-1" aria-hidden="true" style="position: absolute; top: 0px; left: 0px; width: 100%; height: 100%; border: none; margin: 0px; padding: 0px;" src="https://mail.google.com/mail/u/0/iframe.html">
- ▶ <div style="font-size: 0; color: white; z-index: -9; position: absolute; top: 0px; left: 0px; width: 100%; height: 100%; border: none; margin: 0px; padding: 0px;">
- ▶ <noscript>...</noscript>
- ▶ <div id="loading" style="display: none;">
- ▶ <div id="roster_comm_link" style="display: none;">
- ▶ <input type="text" name="hist_state" id="hist_state" style="width: 100%; height: 20px; border: 1px solid #ccc;">
- ▶ <script type="text/javascript">...</script>
- ▶ <iframe id="js_frame" class="invfr" name="j30sr2d6jft9a" src="https://mail.google.com/mail/u/0/iframe.html">
- ▶ <iframe id="sound_frame" class="invfr" name="s30sr2d6jft" src="https://mail.google.com/mail/u/0/iframe.html">
- ▶ <iframe id="hist_frame" class="invfr" name="h30sr2d6jft" src="https://mail.google.com/mail/u/0/iframe.html">
- ▶ <script type="text/javascript">...</script>
- ▶ <div class="ata-asE" style="display: none;">
- ▶ <div aria-live="assertive" aria-atomic="true" style="position: absolute; top: 0px; left: 0px; width: 100%; height: 100%; border: none; margin: 0px; padding: 0px;">
- ▶ <div aria-live="polite" aria-atomic="true" style="position: absolute; top: 0px; left: 0px; width: 100%; height: 100%; border: none; margin: 0px; padding: 0px;">
- ▶ <div style="position: relative; min-height: 100%;">

Styles Computed Event Listeners DOM Breakpoints Properties

element.style {

body.aAU {

- overflow-x: hidden;
- overflow-y: hidden!important;

.aAT, .aAU {

- background-color: #fff;

.aAU {

- overflow-x: visible;
- background-color: #fff;

body, td, input, textarea, select {

- margin: 0;
- font-family: arial,sans-serif;

body {

- height: 100%;
- width: 100%;
- overflow: hidden;

Writing CSS for emails

Without support for external stylesheets or `<style>` tags, inline styles must be used.

- ✗ CSS in a linked stylesheet
- ✗ CSS in a `<style>` tag
- ✓ Inline styles



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We'll use inline styles to create this header

Styling the image with inline styles

email.html



```
...  
  
<h1>...  
<p>...  
...
```



In Gmail, the image displays the styles

Add a style attribute with CSS properties inline

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Styling the H1

email.html



```
...  
<h1 style="  
  color: #7fcce9;  
  font-family: 'Arial Black';  
  font-size: 74px;  
  line-height: 74px;  
  margin: 0;  
  text-transform: uppercase;">  
  Lucha Libre!</h1>  
...
```



Inline styles have a higher specificity than Gmail's stylesheet

Reset styles are included inline

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Styling the paragraph

email.html

...

```
<p style="
  background: #5b3885;
  color: #fcfbfd;
  font-family: 'Arial Black';
  font-size: 26px;
  line-height: 26px;
  margin: 0;
  padding: 10px 0;
  text-transform: uppercase;">
Experience 3 Bone-Crushing Hours
</p>
```

...



Container, font, and reset styles

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Content needs a container



We want these aligned with an equal width



Adding a container

email.html



...

```
<div style="
  margin: 0 auto;
  max-width: 600px;">
```

```
<img ... >
```

```
<h1 ... >
```

```
<p ... >
```

```
</div>
```

...



The content is contained and the container is centered

Centering the text

email.html



```
...  
<div style="  
  margin: 0 auto;  
  max-width: 600px;  
  text-align: center;">  
  <img ... >  
  <h1 ... >  
  <p ... >  
</div>  
...
```



Text is now centered

Adding a background

email.html

...

```
<div style="
  background-color: #211f31;
  background-image: url('...bg-
texture.png');">
```

```
<div ... >
```

```
<img ... >
```

```
<h1 ... >
```

```
<p ... >
```

```
</div>
```

```
</div>
```

...



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Testing, testing, testing

